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Karen K Varley

Karen K. Varley

October 23, 2002

Date _____

**PIONEER HI-BRED INTERNATIONAL, INC.
CORPORATE INTELLECTUAL PROPERTY DEPARTMENT**

FAX TRANSMISSION

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TO: Assistant Commissioner for Patents
FROM: Karen K. Varley, Registration No. 45,751
RE: U. S. Patent Application No. 09/905,558; Attorney Docket No. 1016
Title: ZmAxig1 Polynucleotides and Methods of Use
DATE: October 24, 2002 **FAX NUMBER:** (703) 782-9306
NUMBER OF PAGE(S) FOLLOWING THIS SHEET: 13

COMMENTS:

Attached -

- Response to Restriction Requirement / 3 pages
 - Amendment, Petition and Fee Deleting Correctly Named Person(s) Who Are Not Inventor(s) of Invention/ 2 pages
 - Pretty Results / 8 pages

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Docket No. 1016

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Carl W. Garnaat

Date: October 24, 2002

Serial No.: 09/905,558

Group Art Unit: 1638

Filed: July 13, 2001

Examiner: M. Ibrahim

For: ZmAxig1 Polynucleotides and Methods of Use

Assistant Commissioner for Patents
Washington, D.C. 20231

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GROUP 1600

RESPONSE TO RESTRICTION REQUIREMENT

This is in response to the Restriction Requirement mailed September 25, 2002, in which the Examiner has required restriction to one of the following inventions:

- I. Claims 1-13, drawn to an isolated polynucleotide encoding an auxin-induced primary-response gene, transgenic plant and plant cell, and methods for using said polynucleotide, classified in class 800, subclass 278, for example.
- II. Claim 14, drawn to an isolated protein, classified in class 530, subclass 372, for example.
- III. Claims 15-32, drawn to an isolated polynucleotide comprising a transcriptional regulatory element, transgenic plant/seed, and a method for using said polynucleotide, classified in class 800, subclass 298, for example.
- IV. Claims 33-36, drawn to a method for using LEC1 polynucleotide, classified in class 435, subclass 468, for example.

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Applicant hereby provisionally elects with traverse to prosecute the claims of Group III (Claims 15-32), and expressly reserves the right to file divisional applications or take such other appropriate measures deemed necessary to protect the remaining claims.

The Examiner has further stated that for the invention of Group III, election is required of one of inventions (C) – (F), where (C) is SEQ ID NO:3; (D) is SEQ ID NO: 4; (E) is SEQ ID NO: 5; and (F) is SEQ ID NO: 16. The Examiner states that "Inventions...(C) – (F)... are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP 806.04, MPEP 808.01). In the instant case the different inventions, represent structurally different genes. Therefore, where structural identity is required, such as for hybridization or expression, the different sequences have different effects."

The Applicants respectfully traverse. Applicants recognize and respectfully assert that SEQ ID NO: 5 is substantively different from SEQ ID NOS: 3, 4, and 16, in that SEQ ID NO: 5 represents the coding sequence of the ZmAxig1 gene as well as the transcriptional regulatory element. However, as SEQ ID NOS: 3, 4, and 16 share homology exceeding 99%, Applicants ask that all three said sequences be examined in the pending application. Clearly, "different modes of operation, different functions, or different effects" are unlikely given this very high level of structural identity. For the Examiner's convenience, attached is a computer alignment of these three sequences which specifically identifies the two sites wherein the one- or two-base divergence occurs. The output displays nucleotides of individual sequences only where they differ from the 100% consensus sequence; i.e., for any single sequence, where there is no difference from the consensus of all four, a dash is displayed. It will be noted that there is divergence only at position 776 and at positions 1306-1307.

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The Examiner further has required the Applicants to elect a single primer. Applicants respectfully traverse this requirement and provisionally elect SEQ ID NO: 10.

Applicants believe that restriction to a single primer is not warranted. General support for the use of primers to isolate sequences of the present invention is found in the specification, including the first two paragraphs of page 30. In particular it is noted that primers are typically chosen "which selectively hybridize under stringent conditions to at least two sites within a polynucleotide...", implying the simultaneous use of more than one primer. Further, Example 3, beginning on page 39, specifically describes the use of Primers 1, 2, 3, 4, and 5 (SEQ ID Nos. 6, 7, 8, 9 and 10) in isolating the ZmAxig1 5' flanking region and confirming its sequence; these are the primers listed in elected Claim 15.

In accordance with 37 CFR 1.48(b), a petition to amend the inventorship accompanies this Response to Restriction Requirement.

Should the Examiner have further questions or comments with respect to examination of this case, it is respectfully requested that the Examiner telephone the undersigned agent so that further examination of this application can be expedited.

It is not believed that an extension of time is required. However, in the event that extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore is hereby authorized to be charged to Deposit Account No. 16-1852.

Respectfully submitted,

Karen K Varley
Karen K. Varley
Agent for Applicant(s)
Registration No. 45,751

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Attorney Docket No. 1016

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Carl W. Garnaat	Date:	October 24, 2002
Serial No.:	09/905,558	Group Art Unit:	1638
Filed:	July 13, 2001	Examiner:	M. Ibrahim
For:	ZmAxig1 Polynucleotides and Methods of Use		

Assistant Commissioner for Patents
Washington, D.C. 20231

**AMENDMENT, PETITION AND FEE DELETING CORRECTLY
NAMED PERSON(S) WHO ARE NOT INVENTOR(S) OF INVENTION
NOW BEING CLAIMED -NONPROVISIONAL APPLICATION-
(37 C.F.R. § 1.48(b))**

1. This amendment and petition under 37 C.F.R. § 1.48(b) is to delete the name(s) of the following person(s) named as inventor(s) and who is (are) not the inventor(s) of the invention now being claimed: Keith S. Lowe.
2. Claim(s) Now on File
(check and complete all applicable items)
 originally filed claim(s) 15-32.
 originally filed claim(s) , as amended on
 claim(s) filed on
 claim(s) filed on , as amended on

Serial No. 09/905,558
Group Art Unit: 1638

3. Status of Inventorship After Amendment

(check the following item if the inventor(s) remaining after the petition and amendment is accepted are not the inventor(s) of the subject matter of all the claim(s) now being claimed)

- Attached is an explanation of the facts, including the ownership of the claim(s) at the time the last claimed invention was made (Declaration of Inventorship and Common Ownership of Claims in application).

4. Fee (37 C.F.R. § 1.17(i) - \$130.00)

The fee required is paid as follows:

- Attached is a check money order in the amount of \$
- Authorization is hereby made to charge the amount of \$130.00 to Deposit Account No. 16-1852.
- Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

Respectfully submitted,

Karen K. Varley
Karen K. Varley
Agent for Applicant(s)
Registration No. 45,751

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